



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,034	01/28/2004	Bruno Bacon	1062744	9627

59152 7590 09/29/2006

OSLER, HOSKIN & HARCOURT, LLP (AVESTOR)
1000 DE LA GAUCHETIERE STREET WEST
SUITE 2100
MONTREAL, QC H3B-4W5
CANADA

EXAMINER

KALAFUT, STEPHEN J

ART UNIT	PAPER NUMBER
----------	--------------

1745

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/765,034

Applicant(s)

BACON, BRUNO

Examiner

Stephen J. Kalafut

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>(2 dates)</u> . | 6) <input type="checkbox"/> Other: ____ |

Art Unit: 1745

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 6-8, 10-13, 16, 17, 19 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Kutschi (US 6,170,808).

Applicant admits as known an electrical generator (10 in figures 1 and 2) that includes a stack of cells (14) within an enclosure (12), and a compression apparatus that includes a pressure plate (16), a rear plate (18) and a set of springs (20) between these plates. The generator includes two of these apparatuses, one at each end of the cell stack. The pressure plate and rear plate each include a set of receptacles for the ends of the springs, but are otherwise substantially flat. The present claims differ by reciting a spring plate that has a series of lateral extensions acting as springs, rather than separate coil springs. Kutschi discloses a spring plate (1) that includes that includes lateral extensions (3) that form "spring elements" (column 2, line 10), which would act as springs. These may be "punched" (column 2, line 11) out of the main body, and thus "stamped" as presently recited. Since the spring elements are distributed over the entire area of the plate, they would provide for a substantially uniform pressure distribution. The use of steel as a spring material is known in the spring art, and is taught by Kutschi (column 1, line 14). Because each spring element may be loaded individually (column 1, lines 42-45), while still forming part of one overall piece, it would be obvious to use the spring plate of Kutschi in place of the plural springs of the admitted prior art.

Art Unit: 1745

Claims 1-8, 10-13 and 16-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng (US 6,595,503).

Applicant admits as known an electrical generator (10 in figures 1 and 2) that includes a stack of cells (14) within an enclosure (12), and a compression apparatus that includes a pressure plate (16), a rear plate (18) and a set of springs (20) between these plates. The generator includes two of these apparatuses, one at each end of the cell stack. The pressure plate and rear plate each include a set of receptacles for the ends of the springs, but are otherwise substantially flat. The present claims differ by reciting a spring plate that has a series of lateral extensions acting as springs, rather than separate coil springs. Cheng discloses a spring plate (530) that includes that includes lateral extensions (55, 57) that form “cushioning members” (column 3, line 15) and thus act as “spring elements”. These cushioning members extend from both sides of the main body of the spring plate in an alternating pattern. Recitations of how they were made, such as “stamped”, are treated under product-by-process practice, *in re Fitzgerald* 205 USPQ 594. Since the cushioning members are distributed over the entire area of the plate, they would provide for a substantially uniform pressure distribution. Because the spring plate of Cheng is designed to avoid the use of too many components (column 1, lines 47-58), it would be obvious to use the spring plate of Cheng in place of the plural springs of the admitted prior art. Cheng teaches metal as a spring material (column 1, lines 54-55). Selection of an appropriate type of metal would therefore be within the skill of the ordinary artisan.

Claims 1, 2, 4, 6-8, 11, 13-17, 19, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kutschi (US 5,785,303), cited by applicants.

Art Unit: 1745

Applicant admits as known an electrical generator (10 in figures 1 and 2) that includes a stack of cells (14) within an enclosure (12), and a compression apparatus that includes a pressure plate (16), a rear plate (18) and a set of springs (20) between these plates. The pressure plate and rear plate are both substantially flat. The generator includes two of these apparatuses, one at each end of the cell stack. The present claims differ by reciting a spring plate that has a series of lateral extensions acting as springs, rather than separate coil springs. Claim 14 additionally recites a pair of spring plates. Kutschi discloses a leaf spring device that includes two spring plates (1a, 1b) that are superimposed. Each of these includes respective lateral extensions (3) that form “spring elements” (column 1, line 49), which would act as springs. The ends (4) of one set of spring elements are mated with sockets (6) on the other, which enables the two plates to be moored together. Recitations of how they were made, such as “stamped”, are treated under product-by-process practice, *in re Fitzgerald* 205 USPQ 594. Since the cushioning members are distributed over the entire area of the plate, they would provide for a substantially uniform pressure distribution. The use of steel as a spring material is known in the spring art, and is taught by Kutschi (column 1, line 16). Because the spring elements do not transfer their displacement to the surroundings (column 1, lines 50-53), while still forming part of one overall piece, it would be obvious to use the spring plate of Kutschi in place of the plural springs of the admitted prior art.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of either Kutschi (either ‘808 or ‘303 above) or Cheng as applied to claim 8 above, and further in view of Cheu *et al.* (US 6,040,085).

Art Unit: 1745

This claim differs from the above combinations by reciting a foam sheet between the pressure plate and the cells. Cheu *et al.* disclose a foam spring element (143) used to cushion cells (101) within an enclosure (140). The spring element is made of foamed polymer (column 8, lines 66-67) and forms a sheet. Because of the additional cushioning provided by the foam, it would be obvious to use the foam spring element disclosed by Cheu *et al.* with the cells of the admitted prior art, and the spring plate of either Cheng, Kutschi '808 or Kutschi '303.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bacon *et al.* (US 2005/0250005) discloses a battery that includes a retaining member around a stack of cells. Turley *et al.* (US 4,927,717), Gibb *et al.* (US 6,663,996), Perotti (US 5,350,161), Sichel (US 3,275,311) and Bradsen (US 3,266,790) disclose various spring plates comprising leaf springs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is 571-272-1286. The examiner can normally be reached on Mon-Fri 8:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1745

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

sjk

STEPHEN K. LAFUN
PRIMARY EXAMINER
GROUP 1760

